

Title (en)
FUEL CELL WITH IMPROVED THERMAL MANAGEMENT

Title (de)
BRENNSTOFFZELLE MIT VERBESSERTER THERMISCHER VERWALTUNG

Title (fr)
PILE A COMBUSTIBLE A GESTION THERMIQUE AMELIOREE

Publication
EP 2715851 B1 20150408 (FR)

Application
EP 12724121 A 20120524

Priority
• FR 1154607 A 20110526
• EP 2012059755 W 20120524

Abstract (en)
[origin: WO2012160162A1] Fuel cell comprising two stacks (6, 7) of electrochemical cells, a thermal management system formed by a circuit for circulating a heat-carrying fluid in each of the stacks (6, 7) fed in parallel, and an exterior circuit for circulating the heat-carrying fluid outside the stacks (6, 7), the outside circuit (12) comprising a first subcircuit (12.1) furnished with a heat exchanger (14) and a second subcircuit (12.2) connected directly to the input of the interior circuit (10), control valves (16, 17) for controlling the circulation of the heat-carrying fluid to one and/or the other of the subcircuits (12.1, 12.2) as a function of the temperature of said heat-carrying fluid on exit from each of the stacks, the second exterior subcircuit comprising means increasing its head loss so that it is close to or equal to that of the first exterior subcircuit.

IPC 8 full level
H01M 8/04 (2006.01); **H01M 8/02** (2006.01); **H01M 8/24** (2006.01); **H01M 8/10** (2006.01)

CPC (source: CN EP KR US)
H01M 8/0267 (2013.01 - KR); **H01M 8/04029** (2013.01 - CN EP US); **H01M 8/04067** (2013.01 - CN EP US); **H01M 8/04074** (2013.01 - KR US); **H01M 8/04768** (2013.01 - CN EP US); **H01M 8/2465** (2013.01 - KR); **H01M 8/248** (2013.01 - CN EP US); **H01M 8/249** (2013.01 - CN EP US); **H01M 2008/1095** (2013.01 - CN EP US); **Y02E 60/50** (2013.01 - EP US)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
WO 2012160162 A1 20121129; BR 112013030164 A2 20170321; CN 103620844 A 20140305; EP 2715851 A1 20140409; EP 2715851 B1 20150408; FR 2975834 A1 20121130; FR 2975834 B1 20130705; JP 2014519158 A 20140807; JP 5996637 B2 20160921; KR 20140045421 A 20140416; US 2014106253 A1 20140417; US 9337500 B2 20160510

DOCDB simple family (application)
EP 2012059755 W 20120524; BR 112013030164 A 20120524; CN 201280025662 A 20120524; EP 12724121 A 20120524; FR 1154607 A 20110526; JP 2014511883 A 20120524; KR 20137033638 A 20120524; US 201214119143 A 20120524